

Summary

This report describes the sexually transmitted disease burden in Pierce County. Primary emphasis is placed on chlamydia and gonorrhea since they are the most frequently reported STDs in Washington State. The 2003 incidence rates by age and sex for gonorrhea and chlamydia are presented.

The report concludes with a presentation of which providers in your county reported STDs.

Contents

County STD Trends	2
Table 1: Washington State Reportable Sexually Transmitted Diseases, 2003	2
<u>Chlamydia</u>	
Figure 1: Chlamydia Incidence Rates, by Age and Gender, 2003	3
Figure 2: Chlamydia Cases by Age (13-19) and Gender, 2003	4
Table 2: Chlamydia Repeater Infections, 2003	5
Table 3: Chlamydia Asymptomatic Infections, 2003	5
<u>Gonorrhea</u>	
Figure 3: Gonorrhea Incidence Rates, by Age and Gender, 2003	6
Figure 4: Gonorrhea Cases by Age (13-19) and Gender, 2003	7
Table 4: Gonorrhea Repeater Infections, 2003	8
Table 5: Gonorrhea Symptomatic Infections, 2003	8
<u>Conclusion</u>	
Table 6: Reported Cases of Gonorrhea and Chlamydia by Provider Type, 2003	9
Infertility Prevention Project (IPP) Sites, 2003	9
Appendix A: Data Sources, Analyses, and Limitations	11

Pierce County STD Disease Trends

Table 1: Washington State Reportable Sexually Transmitted Diseases, Pierce County, 2003.

Disease	2002 Pierce County Cases	2003 Pierce County Cases	2003 Pierce County Rate ^λ (per 100,000)	2003 Washington State Rate ^λ (per 100,000)
Chlamydia	2,733	2,820	384	275
Gonorrhea	636	538	73	45
Early Syphilis	11	5	0.7	1.9
Congenital Syphilis	0	0	-	0.0 (live births)
Late/Late Latent Syphilis	8	14	1.9	2.0
Herpes (initial infection)	221	236	32	34
GI/LGV/Chancroid**	1	0	-	0.0
HIV cases**	47	46		
AIDS cases**	29	33		
TOTAL (excluding HIV/AIDS cases)	3,610	3,613	492	359

^λ Denominator estimates for the calculation of incidence rates from Washington State Adjusted Population Estimates, OFM, February 2004.

* Rates cannot be calculated for years with fewer than five cases.

** See Appendix A for explanation of disease acronyms.

In 2003, Pierce County experienced a decrease from 2002 in its combined STD morbidity rate. With 3,613 new cases of STDs (excluding HIV/AIDS cases ¹) in 2003, the incidence rate for all STDs was 492 per 100,000 persons. This is 37% greater than the 359 per 100,000 combined STD rate for Washington State. Pierce County reported no cases of congenital syphilis, GI/LGV/Chancroid in 2003.

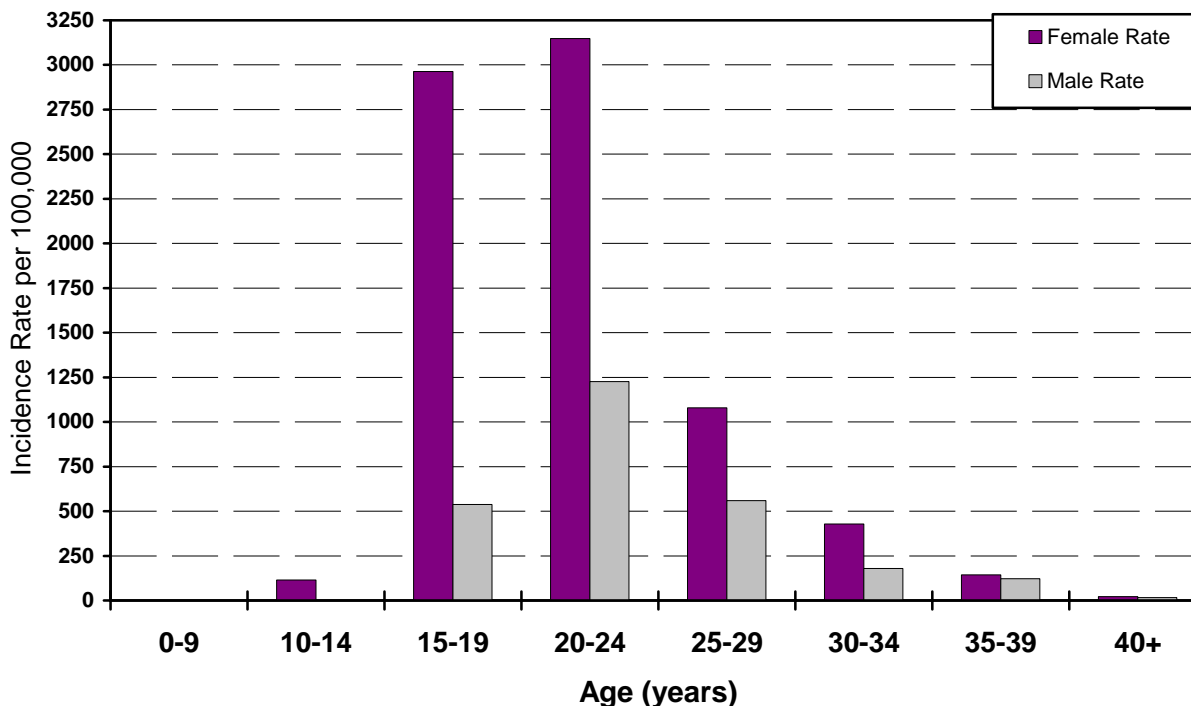
2003 compared to 2002:

- Chlamydia had a 3% increase in reported cases (2,820 vs. 2,733).
- Gonorrhea had a 15% decrease in reported cases (538 vs. 636).
- Early syphilis had a 55% decrease in reported cases (5 vs. 11).
- Late/late latent syphilis had a 75% increase in reported cases (14 vs. 8).
- Initial infection herpes had a 7% increase in reported cases (236 vs. 221).
- Chancroid had a 100% decrease in reported cases (0 vs. 1).

¹ Complete information on the HIV/AIDS epidemic in Washington can be found in [Washington State HIV/AIDS Surveillance Report](#), Washington State Department of Health, IDRH, Assessment Unit.

Chlamydia

FIGURE 1: Chlamydia Incidence Rates by Age and Gender, Pierce County, 2003^λ



Female Rate	0	115	2,963	3,147	1,079	428	144	21
Male Rate	0	*	538	1,227	560	179	122	17
Female Cases	0	32	796	801	250	115	40	34
Male Cases	0	1	151	339	136	49	35	25

^λ Denominator estimates for the calculation of incidence rates from Washington State Adjusted Population Estimates, OFM, February 2004. Incidence rates rounded to the nearest whole number.

* Rates cannot be calculated for ages with fewer than five cases.

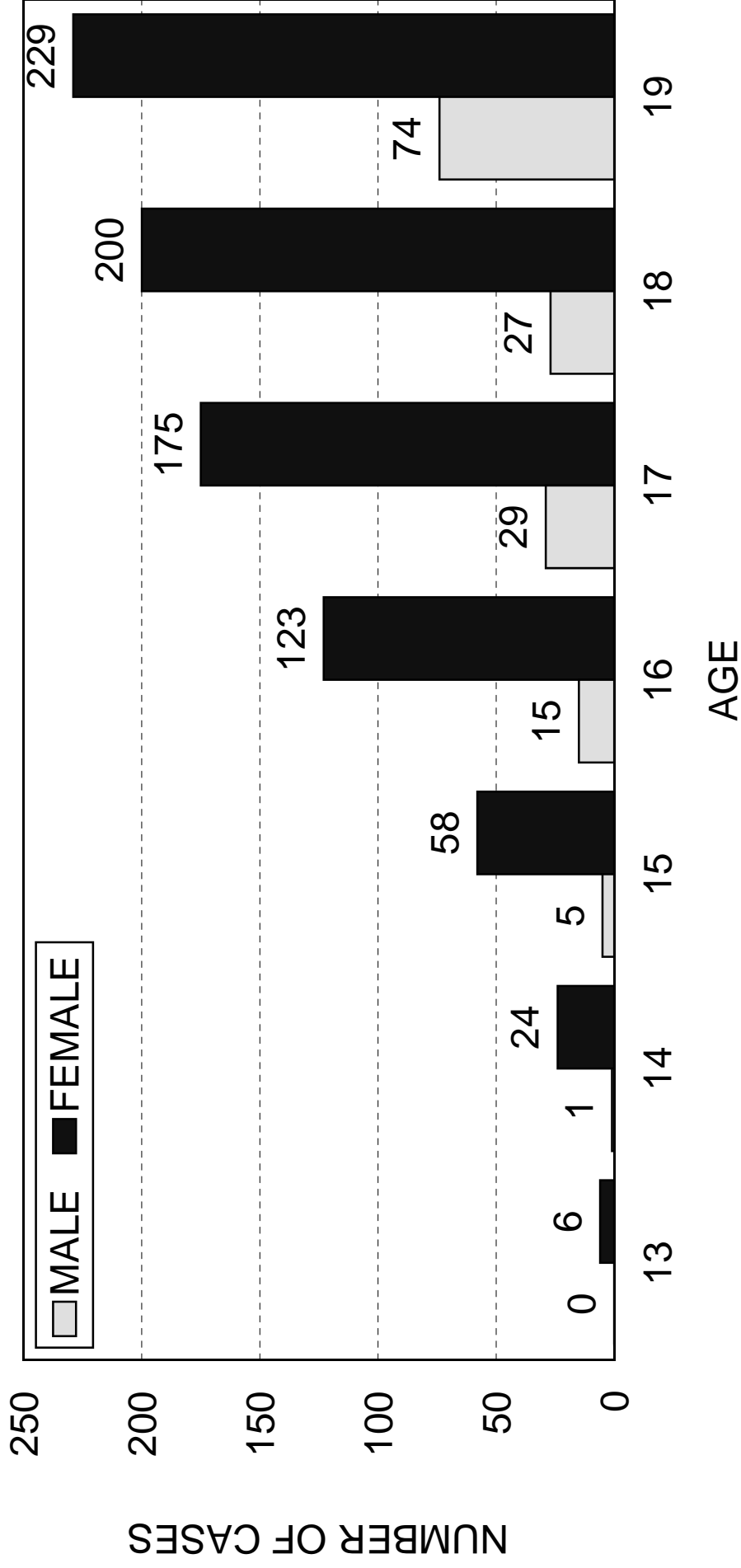
In 2003, the female chlamydia incidence rate peaked among the 20-24 year old age group, at 3,147 cases per 100,000. After this peak, chlamydia incidence among females progressively declined with increasing age. Among men, the 2003 chlamydia incidence rate peaked among 20-24 year olds at 1,227 cases per 100,000, then declined with increasing age.

Only women are routinely screened for chlamydia. Because active case-finding is preferentially limited to women, the incidence of chlamydia in men may be under-reported by comparison. Caution should be used in interpreting comparisons of chlamydia rates between genders.

The 2002 STD Treatment Guidelines from CDC recommends that all women diagnosed with chlamydia be re-screened three to four months after treatment. This was suggested because of the high prevalence of chlamydia found in women diagnosed with the disease in the preceding months, presumably as a result of re-infection.

PIERCE COUNTY

TEEN (13-19) CHLAMYDIA CASES - 2003



Repeater Infection (Person having more than one infection in a 12-month period prior to being treated.)

Recurrent infection is common and associated with increased risk of PID and other serious outcomes. Data suggest that young age and incomplete therapy increases the risk for a persistent/recurrent infection. Studies also suggest that women's current male sex partners are not receiving treatment for chlamydia and that women are being re-infected by resuming sex with preexisting (and infected) sex partners. Careful interviewing and prompt, concurrent treatment of all partners is important. People should be coached to ask health care providers for re-screening if risk behavior occurs.

Table 2: **Chlamydia** Repeater Infections, Pierce County, 2003.

	MALE	FEMALE	TOTAL
Reported Cases	742	2,078	2,820
Repeaters Identified	50	242	292
% Repeaters	7%	12%	10%
Age			
0-9			
10-14		1	1
15-19	11	123	134
20-24	27	99	126
25-29	7	14	21
30-34	4	4	8
35-39	1		1
40+		1	1
Unknown			

Asymptomatic Infection

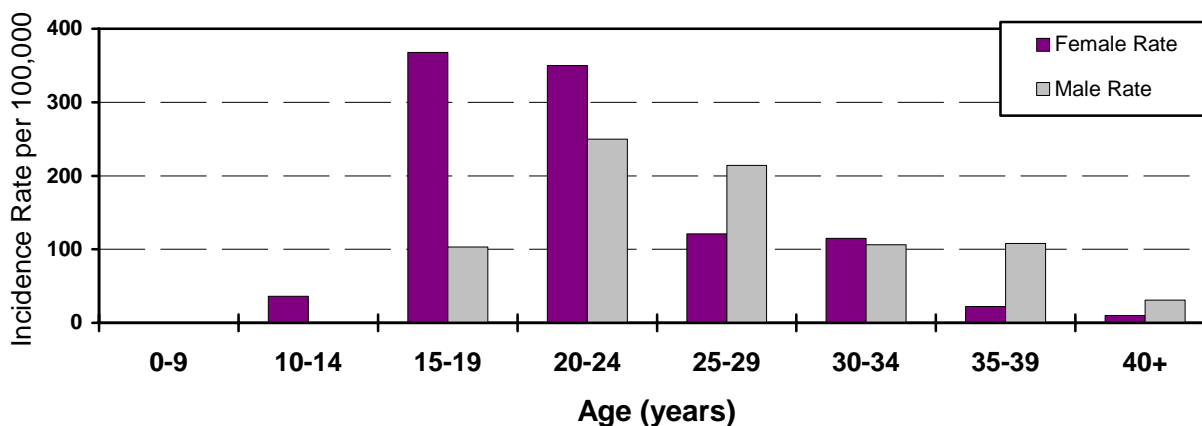
STD infections often lack signs and symptoms. Additionally, signs of severe complications may not appear until long after infection, reducing the likelihood that the patient will associate complications with the initial time of infection. Screening sexually active adolescents (19 years and younger) for chlamydia should be routine during annual examinations even if symptoms are not present. Screening women and men aged 20-24 is also suggested, particularly those who have new or multiple sex partners and who do not consistently use barrier contraceptives. Careful interviewing and treatment of all partners is important.

Table 3: Reported Cases of **Chlamydia** by Diagnostic Category, Pierce County, 2003.

	Private		Public		Total		Total
Diagnosis	Male	Female	Male	Female	Male	Female	Cases
Asymptomatic	155	945	161	258	316	1,203	1,519
Symptomatic-Uncomplicated	238	695	154	72	392	767	1,159
Pelvic Inflammatory Disease		22		1		23	23
Other	1				1		1
Unknown	8	17	25	68	33	85	118
TOTAL	402	1,679	340	399	742	2,078	2,820

Gonorrhea

FIGURE 3: Gonorrhea Incidence Rates by Age and Sex, Pierce County, 2003^λ



Female Rate	0	36	368	350	121	115	22	10
Male Rate	0	0	103	250	214	106	108	31
Female Cases	0	10	99	89	28	31	6	16
Male Cases	0	0	29	69	52	29	31	46

^λ Denominator estimates for the calculation of incidence rates from Washington State Adjusted Population Estimates, OFM, February 2004. Incidence rates rounded to the nearest whole number.

* Rates cannot be calculated for years with fewer than five cases.

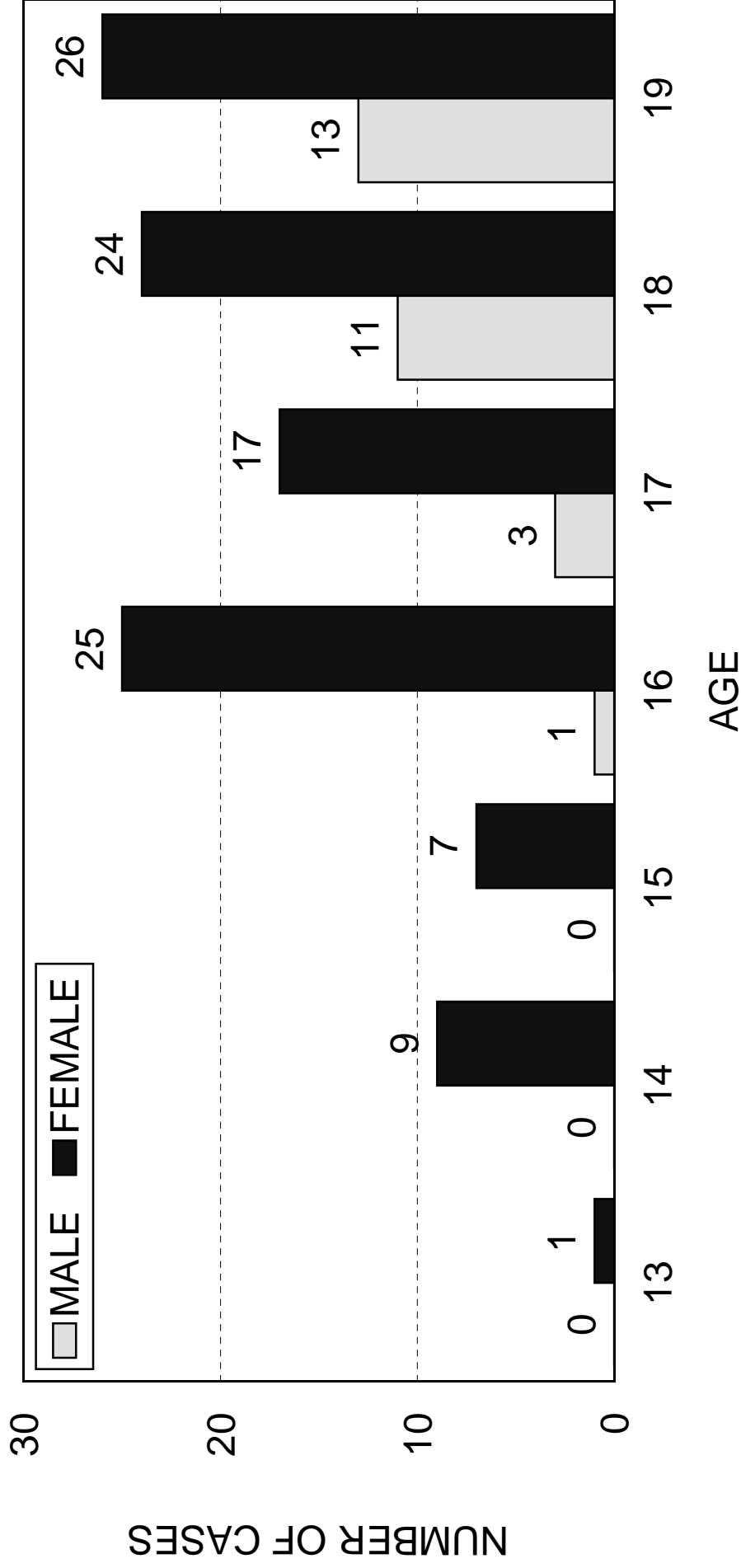
In 2003, the female gonorrhea incidence rate peaked among the 15-19 year old age group at 368 cases per 100,000. After this peak, gonorrhea incidence among females progressively declined with increasing age. Among men, the 2003 gonorrhea incidence rate peaked among 20-24 year olds at 250 cases per 100,000, and declined with increasing age.

In Washington State the reported rate in 2003 was 45/100,000, a decrease of 6.6% from 2002 rates and the second annual decrease in rates since 2001. Statewide, the greatest incidence of disease among females, 62% of total female morbidity in 2003, was among 15-24 year olds, while for males the burden of disease is distributed more evenly among those 25 and older. Males had a higher gonorrhea rate (52/100,000) than females (38/100,000). A major factor contributing to the distribution of gonorrhea incidence in different age groups among men or women is the documented outbreak among MSM (men who have sex with men) whose median reported age was 30.

Findings from the Gonococcal Isolate Surveillance Project (GISP) in Seattle have indicated that Washington State is now an area with increased prevalence of quinolone-resistant *Neisseria gonorrhoeae* (QRNG). Based on these findings, the Washington State Department of Health recommends that health care providers in the state should no longer use fluoroquinolones (ciprofloxacin, levofloxacin and ofloxacin) as first line therapy for gonorrhea. The antibiotics of choice are ceftriaxone (Rocephin™) or cefpodoxime (Vantin™) followed with either azithromycin or doxycycline to treat possible coexisting chlamydial infection.

PIERCE COUNTY

TEEN (13-19) GONORRHEA CASES - 2003



Because most gonorrhea cases are symptomatic and seek medical care, reported cases are considered to be an accurate reflection of true disease incidence in the overall population. Providers in Washington State who reported gonorrhea cases in 2003 indicated that 83% of the men were symptomatic for gonorrhea; 47% of the women were symptomatic.

Table 4: **Gonorrhea** Repeater Infections, Pierce County, 2003.

	MALE	FEMALE	TOTAL
Reported Cases	257	281	538
Repeaters Identified	24	20	44
% Repeaters	10%	9%	10%
Age			
0-9			
10-14			
15-19	3	7	10
20-24	5	8	13
25-29	7	2	9
30-34	6	1	7
35-39	2	2	4
40+	1		1
Unknown			

Table 5: Reported Cases of **Gonorrhea** by Diagnostic Category, Pierce County, 2003.

	Private		Public		Total		Total
Diagnosis	Male	Female	Male	Female	Male	Female	Cases
Asymptomatic	13	81	16	27	29	108	137
Symptomatic-Uncomplicated	153	127	61	22	214	149	363
Pelvic Inflammatory Disease		11				11	11
Other	1				1		1
Unknown	5	2	8	11	13	13	26
TOTAL	172	221	85	60	257	281	538

Conclusion

Table 6: Reported Cases of Chlamydia and Gonorrhea by Provider Type, Pierce County, 2003.

Provider Type	Chlamydia			Gonorrhea		
	No. of Providers	No. of Cases	Percent of Total Cases	No. of Providers	No. of Cases	Percent of Total Cases
Alcohol/Substance Abuse						
Blood Bank/Plasma Center						
Community Health Center	12	215	8%	9	71	13%
Emergency Care (excl. hosp.)	17	108	4%	7	33	6%
Family Planning	15	460	16%	5	35	7%
Health Plan/HMOs	7	128	5%	5	17	3%
HIV/AIDS						
Hospitals	22	371	13%	14	105	20%
Indian Health	3	52	2%	1	5	1%
Jail/Correction/Detention	8	167	6%	5	35	7%
Job Corps						
Migrant Health	3	56	2%	1	14	3%
Military	2	432	15%	2	82	15%
Neighborhood Health	5	12	0%	3	3	1%
OB/GYN	15	84	3%	7	10	2%
Other	106	513	18%	46	100	19%
Private Physicians	34	120	4%	10	12	2%
Reproductive Health	10	50	2%	3	5	1%
STD Clinics	5	21	1%	2	10	2%
Student Health	5	31	1%	1	1	0%
TOTAL	269	2,820	100%	121	538	100%

In Pierce County, the Other providers reported the highest number of chlamydia cases. These providers reported 18% of the total. Family Planning providers reported the second highest number of chlamydia cases (16%). Gonorrhea cases (20% of the total) were most frequently reported by Hospitals.

The Healthy People 2010 national objectives for chlamydia incidence are:

Females aged 15-24 attending family planning clinics: 3%. There are 2 Region X Infertility Prevention Project* Family Planning clinics in Pierce County. The 2003 positivity rate for females was:

Site	<u>Male</u>			<u>Female</u>		
	# Tests	# Pos	% Pos	# Tests	# Pos	% Pos
PP of Western WA- Puyallup	1	0	0.0	1,341	119	8.9
PP of Western WA – Tacoma	3	0	0.0	1,861	166	8.9

Females aged 15-24 attending STD clinics: 3%.

Males aged 15-24 attending STD clinics: 3%.

There are 0 Region X Infertility Prevention Project* STD/Reproductive Health clinics in Pierce County.

Other Region X Infertility Prevention Project Sites in Pierce County include:

Site	<u>Male</u>			<u>Female</u>		
	# Tests	# Pos	% Pos	# Tests	# Pos	% Pos
HIV Counseling & Testing (Tacoma)	56	5	8.9	45	2	4.4
Pacific Lutheran University.	0	0	0.0	105	2	1.9
University of Puget Sound	2	1	50.0	145	4	2.8
Puyallup Tribal Clinic	20	5	25.0	73	9	12.3
Remann Hall Juvenile	382	22	5.8	221	38	17.2
WA Corrections Center for Women (Purdy)	2	0	0.0	1,137	43	3.8
PLU Wellness	40	15	37.5	5	1	20.0
Sea Mar-Tacoma	75	22	29.3	154	9	5.8
Tacoma-Pierce Co Outreach	29	1	3.4	23	0	0.0

The year 2010 Healthy People 2010 national objective for gonorrhea incidence is 19 cases per 100,000. Pierce County is working toward this goal with the 2003 rate of 73 cases per 100,000.

The Aptima test used to diagnose chlamydia is a combined test that will also diagnose gonorrhea. Gonorrhea positives from the Region X Infertility Prevention Project (IPP) sites include:

Site	<u>Male</u>			<u>Female</u>		
	# Tests	# Pos	% Pos	# Tests	# Pos	% Pos
PP of Western WA - Puyallup	1	0	0.0	1,340	10	0.7
PP of Western WA - Tacoma	3	0	0.0	1,858	12	0.6

Site	<u>Male</u>			<u>Female</u>		
	# Tests	# Pos	% Pos	# Tests	# Pos	% Pos
HIV Counseling & Testing (Tacoma)	56	1	1.8	45	0	0.0
Pacific Lutheran University.	0	0	0.0	105	0	0.0
University of Puget Sound	2	0	0.0	145	0	0.0
Puyallup Tribal Clinic	20	0	0.0	73	1	1.4
Remann Hall Juvenile	382	3	0.8	219	6	2.7
WA Corrections Center for Women (Purdy)	2	0	0.0	1,138	5	0.4
PLU Wellness	40	1	2.5	5	0	0.0
Sea Mar-Tacoma	75	7	9.3	154	2	1.3
Tacoma-Pierce Co Outreach	29	0	0.0	23	1	4.3

*For Region X Infertility Prevention Project Screening Criteria see page 12.

Appendix A: Data Sources, Analyses and Limitations

Cases: The number of cases identified and submitted by providers to local health jurisdictions and forwarded to the Washington State Department of Health, Office of Infectious Disease and Reproductive Health, STD/TB Services.

Population: Denominator population estimates for incidence rates are from Washington State Adjusted Population Estimates, Office of Financial Management (OFM), February 2004.

Incidence Rates: Incidence rates are calculated as the number of new episodes of a disease (not persons) in a given year divided by the total population (age and sex appropriate) for that year, expressed as a rate per 100,000. Incidence rates allow comparisons between two or more populations by standardizing the denominator and are the most appropriate statistic to use when investigating differences between groups. Rates should not be calculated for incident case totals fewer than five because the rates are unstable.

Data Reporting: Gonorrhea, chlamydia, syphilis, and herpes (initial infection) are reportable diseases to the local health jurisdictions and forwarded to the Department of Health. To be reported and included in surveillance data, disease definition must be met.

Disease Definitions:

- Gonorrhea - isolation of *Neisseria gonorrhea* from a clinical specimen or observation of gram-negative intracellular diplococci in urethral or endocervical smears, culture or non-culture methods.
- Chlamydia- isolation of *Chlamydia trachomatis* from a clinical specimen by culture or non-culture methods that detect chlamydia antigen or genetic material.
- Syphilis - a complex sexual transmitted disease with a highly variable clinical course. See CDC guidelines for surveillance definition.
- Herpes Simplex (initial infection only) - diagnostic criteria for reporting can be made through clinical observation of typical lesions and/or laboratory confirmation.
- Chancroid - an STD characterized by painful genital ulceration and inflammatory inguinal adenopathy.
- Granuloma Inguinale (GI) - a slowly progressive ulcerative disease of the skin and lymphatics of the genital and perianal area.
- Lymphogranuloma Venereum (LGV) - characterized by genital lesions, suppurative regional lymphadenopathy, or hemorrhagic proctitis.
- HIV – Human Immunodeficiency Virus is a retrovirus causing HIV disease and AIDS (Acquired Immunodeficiency Syndrome) in humans. This pathogen is transmitted from person to person through unprotected sexual contact, sharing of injection equipment and transfusion/transplantation with infected blood or tissue.
- AIDS – Acquired Immunodeficiency Syndrome is the advanced stage of HIV-disease in humans and is characterized by severe suppression of immune response. Persons with AIDS are at risk for increased susceptibility to opportunistic infections, degradation of major organ systems and eventual death.

The diagnosing practitioner is responsible for providing the case information which includes patient demographics, source of diagnosis, limited clinical information including site of infection and treatment, and date of diagnosis.

Data Strengths: Sexually transmitted disease data may provide more timely information on behavioral trends in the community than diseases with similar modes of transmission particularly HIV/AIDS. There is a high level of participation in the STD surveillance system by private providers of STD services.

Data Limitations: Clinically diagnosed cases of STDs (without laboratory confirmation) may be missed through this surveillance system. Depending upon diagnosing practices, completeness of reporting may vary by source of health care.

Data Biases: Biases could exist in the data due to under-reporting, inability of certain populations to access medical services, error in laboratory reporting, or differential reporting or screening by disease and source of care. However, it is assumed that the number of cases that would fall into these categories is small and normally distributed, thus not significantly impacting the calculated STD rates.

Assumptions: It is assumed that the cases reported from year to year are independent of each other. One violation of this assumption could be if a person who has an STD one year is more likely to have an STD the following year. Also, repeat episodes of the same STD by the same person are not excluded from the numerator count; it is felt that these numbers are not large enough to significantly impact the calculated incidence rates. Finally, we have assumed that all rates follow a chi-square distribution.

Female Selective Screening Criteria in Family Planning and Expansion Sites:

1. Women 24 and under should be tested at least annually when undergoing a pelvic exam.
2. All women 25 and older who meet one of the following criteria should be screened:
 - a. Cervical findings of mucopurulent cervicitis, friable cervix, ectopy with inflammation or edema,
 - b. PID (Pelvic Inflammatory Disease),
 - c. Exposed to CT in past 60 days,
 - d. Symptomatic sex partner during past 60 days,
 - e. Pregnant,
 - f. Seeking an IUD insertion,
 - g. Prior chlamydial infection within the past 12 months.